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EDITORIAL

OUR DIAMOND ANNIVERSARY

The JOURNAL celebrates with this issue its seventy-fifth anniversary, as the first number was issued in May, 1844.

The actual editors have been at the helm for twenty-three years, and it is a great satisfaction to them to be able to mention that, during the whole period, the JOURNAL has appeared promptly each and every month, not excepting times of epidemic or war, floods or storms. The only break in the publication occurred during the Civil War, when editors, contributors and readers were mostly in the army.

In a modest way we have striven to do our bit, and believe we

can state, without fear, that we have tried to live up to the ideals of the founders of our publication, and can quote, without compunction, the following from the first page of Volume 1, No. 1:

"Our Journal shall be liberal, independent and impartial. * * * Whatever credit or folly may be attached to the undertaking will belong to the editors alone. It is subservient to no personal, no party interests. We pursue a higher and a nobler aim—The cultivation of medical science and the improvement of its followers.

"We look to the accomplishment of these objects for our reward, and if we fail we shall at least have the satisfaction of having attempted something useful.

"To the medical corps of New Orleans, of every nation and tongue, our pages are freely offered and their contributions are respectfully invited. Of course, they can only be published in the English language, but there is no difficulty in procuring good translations."

We thank sincerely all those who have given us their aid and support in any way, and shall endeavor to continue deserving their endorsement in the future.

SOME PSYCHOLOGY OF SYPHILIS.

Each year for many seasons Fournier, the great syphilologist, spent several lectures teaching the importance of the early effects upon the nervous system in syphilis, and he particularly stressed the loss of *morale* in such patients.

The syphilophobia of those with genital lesions bearing suspicious evidences, but incapable of proof of syphilis in the earlier period before the laboratory tests were available, often was misleading. One elemental fact, however, always stood out: the syphilophobic was always frank; the syphilitic for some time the contrary—as Fournier put it, lying is a symptom of syphilis.

The reference to these observations on some psychologic changes in early syphilis has been occasioned upon the reading of the circular of instructions just issued by the City Board of Health, and which "the physician must hand to the patient."

We are thoroughly conversant with the mental attitude of the patient with syphilis, and we know that the majority of them will be apt to read of the disease when they can, and thereby increase the ordinary morbid influences which must be overcome, but we can imagine no greater contribution to the evils of his imagination than the array of symptoms outlined in the circular and which the greater number of victims will at once anticipate as to be expected in the course of his own case.

We believe that the intelligence of a patient should be appealed to and that his personal hygiene is a matter of the greatest importance, but how is it practicable when the patient is told to read carefully and often an array which might give a healthy man or woman a nightmare and a sick one a near-delirium?

It is a wise precaution to advise sterilized drinking-cups and eating utensils, but this necessitates either accommodation for such at all eating places, hotels and on public carriers, or the syphilitic must be compelled to drink and eat only at his own domicile, where he may do as he pleases.

It is a wise step to afford the physician the facilities for easy treatment for his patient, but no physician who thinks twice will put such a circular in the hands of a patient with syphilis looking for relief of the disease.

Such circulars might be posted in all public places for the purpose of scaring those who might pass in the way of disease, and for such a purpose the circular might serve an admirable purpose, but it would appear to us that by attempting to force the circular upon unwilling doctors and unwilling patients the end result may be that the Board of Health is on the way to getting rid of a bad law by enforcing it.

MEETING OF THE STATE SOCIETY.

The Louisiana State Medical Society held its annual meeting on April 9, 10 and 11 in Shreveport. The total attendance was 212, with thirty-five from New Orleans. While the average number of papers were on the program, there were probably fewer absentees than usual among the readers. All in all, the scientific aspect of the meeting, if not brilliant, was quite satisfactory.

As usual, the Shreveport members were cordial, attentive, and "on the job." The creature comforts of the visitors were looked after with interest, the entertainments well arranged and liberal.

All told, the meeting was a successful one, and we should be thankful to the respective officers and to the Shreveport contingent for the favorable outcome.

ORIGINAL ARTICLES

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. Reprints may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

BLOOD CHEMICAL METHODS IN DIAGNOSIS AND PROGNOSIS.*

By R. B. H. GRADWOHL, Lieuteant Commander, M. C., U. S. N. R. F.,
St. Louis, Mo.

A discussion of the problems connected with the newer methods of blood analysis for the detection of derangements in kidney function would be incomplete without paying some attention to the subject of urine analysis—methods of examination which have been in vogue for quite some time and the importance of which we do not in any way wish to decry or minimize.

A brief historical review of these methods in medicine is, therefore, not amiss. Gross changes in the appearance of the urine were noted by the earliest of medical writers, namely, Hippocrates. He taught that there were prognostic aspects to the examination of physiological characteristics of urine.

He showed that there was probably some pathological change in kidneys when there was a change in the physical properties of urine: its quantity, color and clearness, its cloudy or turbid appearance and the differences in the gross appearancea of its sediments.

He tried to show that there was a definite influence of food and drink upon the urine. Others after Hippocrates alluded to the same characteristics, but added nothing new. It was Galen who systematized these Hippocratic teachings, but century after century passed without a single addition to this information. Then came Avicenna, the Arabian physician, 980-1037, who showed that external influences, such as fasting vigils, physical and mental exertions, influenced the conditions of the urine. He showed that internal administration of certain drugs could color the urine. During the Middle Ages, Johannes, called Actuarius, living at the court of Byzantium, in the thirteenth century, added his own observations to those of the Hippocratic-Galen period, describing the minute physiological characteristics of urine.

*Read before the Orleans Parish Medical Society, February 24, 1915.

No chemical data, of course, were at hand, and therefore no real progress could be made until the development of chemistry occurred; this came with the work of Lorenzo Bellini, of Florence. He evaporated urine and noted that, when he added water, the solids dissolved, returning step by step through various intensities of taste and color until the original condition almost ensued. He therefore concluded that the different colors and tastes of urine were due to variations in concentrations of the solid ingredients. Later Dobson and Willis discovered sugar in urine.

Brandt found phosphorus which, Markgraff proved, came from the phosphates. Rouelle discovered urea in 1773, and found calcium carbonate, as well as hippuric acid, in the urine of herbivora. In 1770, Cortugno found albumin in urine; in 1798, Cruikshank noted the connection of this albuminuria to dropsy, but it remained for Richard Bright, physician and pathologist to Guy's Hospital, to show the true relations of dropsy and albumin to disease of the kidneys.

"Bright's Report of Medical Cases," published in 1827, presents a striking contrast to the vague humoralism of his predecessors, the work showing the solidism of his pathology. He ascribed albuminuria and dropsy to the altered anatomical condition of the kidneys and he figured the changes in the kidneys much as they are described and recognized to-day.

About this time, the chemical analysis of gravel and calculi were undertaken, the principal writers on this subject at that time being Wollaston, Scheele, Wetzlar and Prout. The work of Rayer and Becquerel was epoch-making, in that it covered not only the chemistry, but also the microscopy, of urine sediment. Casts were first described by Vogla in 1837.

Nasse and Simon amplified this description. It was Henle, however, who, in 1844, insisted most particularly upon their significance in renal disease. Later chemical and microscopical researches have given us the present technic of urine examinations, which are familiar to all of us.

We must not forget to allude to the historical aspect of the search for sugar in urine and blood, as this subject intimately concerns us in the present paper. While diabetes was known to the ancients, Celsus, Aretæus, Galen and Paracelsus, they gave no intimation that they suspected it was characterized by the presence of sugar in the urine.

Ayur Vedda, in 500 A. D., claimed that this was known to Hindu physicians, but no European knew it until Dobson demonstrated it in the eighteenth century. The first demonstration of sugar in the blood was made by Ambrosian in 1835. The remarkable work of Claude Bernard, in 1848, opened up a path of investigation on the elaboration of carbo-hydrate metabolism that fully explains glycemia as we know it to-day.

The question of studying the intimate metabolism of the body by means of chemical tests of blood was before the minds of many investigators abroad for some years. It remained, however, for American research workers to develop methods which, because of the fact that but small quantities of blood were required and because these tests could be rapidly carried out, have resulted in the development of some surprisingly useful facts of great value to clinicians.

The names of Folin, Denis, Benedict, Myers and Fine represent the group of men who, since 1912, have given us the principal points in the technic now in use. Our interest in this new-born department of chemical hematology is based upon a close study of these methods from a technical and from an interpretative clinical standpoint. A consideration of facts of normal metabolism is necessary in order to thoroughly understand exactly what we are seeking here to depict.

These blood chemical methods entail a search in blood mainly for the products of non-protein nitrogenous metabolism, to-wit, urea nitrogen uric acid, creatinin and sugar. We will not take up other products, the interpretation of which is still under investigation. As a result of these tests we have established certain quantitative normals; these are, in terms of one hundred cubic centimeters of blood: uric acid ⅓ mg., urea nitrogen $\frac{1}{215}$ mg., creatinin ½.5 mg., and sugar 0.08-0.12 per cent. It has been shown that substance which is easiest of all for the kidneys to throw out is creatinin, then comes urea nitrogen, and finally uric acid.

Uric acid is the most difficult, creatinin the easiest to eliminate. Therefore the first change in the concentration of these ingredients in the blood when kidney function is disturbed is a retention of uric acid.

As the change in kidney function is aggravated, we next have a retention of urea nitrogen; we finally see creatinin stored up. This occurs manifestly only in extreme states of kidney derangement.

This storing-up of these ingredients in this manner is called by Myers and Chase the "stair-case" effect, and indeed this expression most graphically describes it. We see in practical work, in the very beginning of chronic interstitial nephritis, an increase in acid alone. There may or may not be alterations in the urine; perhaps none, perhaps only a trace of albumin and an occasional cast. In next order, the urea nitrogen is increased, and here there may be little or no change in the urine.

Creatinin finally is blocked, and still we may have no increase in the pathologically formed substances in urine. It is in the interstitial type of nephritis that we see the most interesting blood pictures. We may have in the so-called parenchymatous type an increase of all these ingredients only in severe states, not step by step, as we see it in the interstitial variety. It is in that state known as uremic nephritis that we see the highest concentrations of all these ingredients.

At this point I wish to call attention to the concentration of creatinin as first noted by Folin and later confirmed by Myers and Lough, with respect to prognosis. Knowing that creatinin is the easiest ingredient of these three to be eliminated by the kidneys, its retention in undue quantity is suggestive of most critical derangement of kidney function.

The normal figure in blood is from 1 to 2.5 mg. per 100 cc. of blood. When creatinin is stored up in the quantity of 5 mg. or over, we can safely make a fatal prognosis, regardless of the apparent good condition of the patient. In an extended experience with severe nephritis we have never seen an exception to this finding, nor has the writer seen any statement in the literature contradicting this.

In a study of thermic fever cases with Dr. Schisler last summer, this prognostic factor came out in a striking manner in some of these cases. In recent experiences at the City Hospital, this prognostic factor has asserted itself correctly time and again.

Another line of investigation which blood chemistry has opened up is the correct method of differentiating gouty from other arthritic conditions by means of an estimation of uric acid. Many years ago Garrod stated that uric acid is markedly increased in the blood in gout, but not in rheumatism; his views, not being in accord with existing authority, were disputed at the time.

Strange as it may seem, this discerning clinical observer

reasoned correctly, even though he had no clinical methods to mathematically prove his point. In gouty conditions we have figures of uric acid over 3.5 gm., at times as high as 25 gm. In rheumatism we have no accumulation of uric acid in blood. Blood chemistry plays an important part in the differential diagnosis between cases that are purely renal in origin and secondarily only cardio-vascular, and those that are purely cardio-vascular and only secondarily renal.

We believe that the experiences which we have had, in association with Drs. Schisler and Powell at the City Hospital, have very often clearly made this distinction where other methods have failed to do so. We refer, of course, to the extreme cases of both kinds, cases that are in a condition commonly called uremic, with albumin and casts in the urin in both cases, with increased blood pressure, and often with severe cardiac symptoms. In these cases we find that there is a marked accumulation of all these non-protein nitrogenous ingredients in the first type of case, namely, the primary renal; in the second group of cases there is no such accumulation, or very little.

In the purely nephritic type of advanced variety we have found all ingredients increased, with creatinin above the fatal point. In a recent experience we saw two cases, both apparently in an uremic status. One had urea nitrogen 99, uric acid 9.8, creatinin 6.76, sugar 0.144 per cent—manifestly a case of uremic nephritis; the other showed urea nitrogen 25, uric acid 5.7, creatinin 1.62, 0.114 per cent sugar—manifestly not a uremic.

Both cases, clinically, were alike. The first case died the following day; the second case died some time later of heart block. This differentiation should be helpful in treatment. The importance of blood chemistry is manifest in a study of diabetes mellitus. We know that the normal amount of sugar in blood is 0.08 to 012 per cent. Any figure above this is called hyperglycemic. It is stated by Hamman and Hirschman and others that sugar may rise in the blood to the point of 0.18 per cent before it appears in the urine; it may appear in the urine, of course, below this point. The threshold point is ordinarily 0.18 per cent, yet we have several instances where there was a concentration of 0.22 per cent before glycosuria occurred.

The importance of a knowledge of the amount of blood sugar present in any given case is seen, first, for purposes of diagnosis;

secondly, for guidance during the treatment of diabetes mellitus. It is also important in clearing up the differential between renal diabetes and diabetes mellitus. We know that in renal diabetes there is no increase in blood sugar; in diabetes mellitus there is always hyperglycemia. We mention this differentiation, fully aware, however, that some authorities maintain that renal diabetes is simply a forerunner of diabetes mellitus and is not in itself a clinical entity.

Allen, Mosenthal and others believe that there are well-authenticated cases of renal diabetes on record that are not prior cases of diabetes mellitus. Another line of investigation opened up by blood chemistry is the estimation of acidosis. For an estimation of this kind, we have the Van Slyke method of determination of the carbon dioxid power of absorption of blood plasma. We also have Marriott's method for the determination of acidosis by means of the hydrogenion concentration of the blood, as well as the method of Marriott for the determination of the alkali reserve of the blood plasma.

Another method is the determination of the carbon dioxid in alveolar air according to Fredericia's technic. These are methods that are commonly used in the detection of acidosis in connection with diabetic states. Very recently Marriott, Hæssler and Howland have called attention to a method of determination of acidosis that occurs with the nephritic state. They claim that the acidosis met with in nephritis is unlike that of diabetes, namely, an accumulation of acetone bodies; rather is it due to a failure to regulate the formation of acid substances by the kidney, a failure to eliminate acid phosphates.

Their method looks to the estimation of the inorganic phosphates in the blood. The normal figure expressed in terms of phosphorus varied from 1 to 3.5 mg. per 100 cc. of blood.

In nephritic acidosis they found it increased invariably to many times the normal, as much as 23 mg.

Something might be said as to the technic of blood chemical analysis. The sample is procured preferably in the morning, before the patient has eaten his breakfast. Blood is taken in much the same manner it is taken for a serological test, namely, by puncture of a palpable or visible vein on the forearm, made to stand out by means of a tourniquet and by having the patient clinch his fist. The blood is received into a bottle prepared by means of adding and

drying in the bottle overnight ten drops of potassium oxalate 20 per cent solution.

The bottle is agitated, to assist in defibrination, and examined as soon as possible. The examination begins with an estimation of sugar; we use the method of Lewis and Benedict. We next examine for creatinin, according to Folin and Denis' method. Next, uric acid, according to Folin and Denis, and finally urea nitrogen according to Marshall's urease method.

We may, if desired, look for the amount of non-protein nitrogen, cholesterol and total solids. This makes a complete blood chemical analysis. The acidosis tests are only carried out when indicated by fear of that complication arising. The methods are mainly colorimetric.

Before closing, we wish to say a word or two respecting the value of the phthalein test of Geraghty and Rowntree as compared to blood chemical tests. Like others, we have been very much dissatisfied with this test, first, because its principle does not necessarily reside in an estimation of true kidney function; secondly, because it has repeatedly failed in practice to give us reliable information.

We have found it normal where the kidneys were deficient, we have found it showing a decreased elimination where the kidneys were proven by blood chemical methods to be functionally normal, and where later operative procedures and perfect convalescence bore out these facts. In a study which was presented by Dr. Scherck and myself before the American Urological Association these facts were clearly proven in a series of about twenty-five cases, mainly obstructive conditions in the urogenital tract.

In this connection we cannot conclude without calling the attention of the surgical profession to the necessity of utilizing blood chemical methods in surveying operative risk. We believe, from practical experiences, that the methods of urine analysis, no matter how complete, fail to fully apprise the surgeon of the functional capacity of his patient to stand the anesthetic and the usual operative disturbances so famliar to all. We believe that the wide experiences of clinicians with these methods have already proven their usefulness to the internist; the surgeon, too, will find them of extreme usefulness in indicated cases.

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DISCUSSION OF DR. R. B. H. GRADWOHL'S PAPER.

Mr. John G. Bowman, Director, American College of Surgeons: Mr. Chairman and Gentlemen—There is nothing which I can say to contribute directly to this discussion, but I am much pleased to be with you. The American College of Surgeons is at work on a program called hospital standardization. Very briefly, this is what hospital standardization means. Until recent years, at least most of the hospitals in this country were clean, kindly-disposed boarding-houses. They served primarily as a convenience to doctor in which to care for their patients. But the day of the hospital boarding-house is about gone. We are in the midst of a swift evolution in which hospitals are assuming a clear-cut policy toward their communities. They are no longer content to be boarding-houses. They are institutions with a clear-cut policy, which guarantees to their

communities that every man, woman and child cared for within their walls will receive the best care which modern medicine can give. The public is keenly awake on this subject, and the fact is that no hospital can successfully ask the good will, confidence or support of its community unless it in turn, as an institution, stands for the right sort of service. This is not an occasion in which to discuss details of our program on hospital standardization. Let me simply say that hospital superintendents and the medical profession have taken an admirable leadership in order to make their ideals come true.

Dr. Hornsby: I am not going to intrude myself on your very interesting meeting. I was reminded of an incident while Dr. Gradwohl and some other gentlemen were talking. I had an old Irish friend some years ago, and kind Providence had in the course of years seen fit to send him fourteen or fifteen children. I said: "Mr. Barrett, don't you find it pretty hard to take care of them as they come along?" He answered: "John, God never sent me one but what He sent me along something to take care of him with." I wonder if this isn't true also of the laboratory? God gave me a hospital and He did not give me any laboratory, but in two years from that time I had a $250,000 laboratory and was stealing $40,000 from the rest of the hospital to work it, and I was justified in doing it. The medical men were more than enthusiastic about what that laboratory was doing for them. The hospital was having a hard time getting along, but after I began to deliver the goods to the medical profession the money seemed to come easier, and every man in the hospital was plugging for that hospital every minute of the time; and while my board was anxious about whether we were going to fill our new hospital, the medical men connected with the institution, spurred on by the kind of work our laboratory was doing, began to fill the hospital. I never had any trouble. Those who have been familiar with my hospital work in Chicago will back me up that I never had any trouble in running it. I got the best man I could find for my laboratory, and paid him the money that was needed to get him, and it happened to be more than $2,000 a year more than I myself was getting in salary. I made him director of the laboratory and then I got a pathologist and a physiologist and a physiological chemist. I spent $40,000 a year. I don't know any more important business than the laboratory of the hospital of to-day.

Dr. H. W. E. Walther: I have greatly appreciated hearing Dr. Gradwohl's paper. The point he brings out emphasizing the importance of blood chemistry are so clear and convincing that little is left to say. However, I must differ with him as to his opinion regarding the value of phenolsulphonephthalein. No one diagnostic or prognostic agent yet discovered is absolutely perfect, and I know that occasionally the phthalein readings—being tests only of the renal output at the time the test is made—are at variance with the clinical pictures, but this is the exception, not the rule. Phthalein readings have helped the urologist a great deal in coming to a decision on many types of cases, and we would not like to have to do without it. It should be used in conjunction with the blood chemical methods to get the best ideas in diagnosis and prognosis. I have done a great deal of blood-urea work in conjunction with the phthalein readings, and it has been interesting to follow the results so obtained

It is to be regretted that no hospital laboratory in New Orleans is fitted to do blood chemistry. All the blood chemistry so far done here

has been done in the private laboratory of the urologist. The time has come when we should get together on this work and have our hospitals fit themselves for this kind of laboratory work. Dr. Gradwohl's paper, I feel sure, will stimulate the work on blood chemistry here, and we should all feel thankful to him for having presented his work to us at this time.

Dr. A. Nelken: I have been anxious to have Dr. Gradwohl present the subject of blood chemical analysis before this Society, because I have been desirous of seeing the local profession awakened to the importance of this matter. The functional capacity of the kidneys is of extreme importance, not only to the urologist, but to every other medical man, regardless of which branch of medicine he is especially interested in. In the last analysis, kidney failure is the most common cause of death, no matter what the specific condition from which the patient is suffering may be.

The importance of newer methods of estimating kidney function became apparent when we learned the unreliability, both for diagnostic and prognostic purposes, of the routine methods of urinary analysis. You may recall Dr. Cabot's statement, that the most important things about the urine were the color, the reaction, and the specific gravity. As our education along this line increased, we saw that we had been giving undue importance to the presence or absence of albumen and casts in the urine.

The introduction of the dye tests was a considerable step in advance. Methylene blue and indigo carmine were used at first, with the idea of finding the time of beginning of secretion. When Rowntree and Geraghty introduced the phenolsulphone test it marked further progress, for this test is applied so as to give us information not only as to the time of beginning of secretion, but also as to the quantity eliminated during a given period. Chiefly, its simplicity of application has served to make it the most popular of all the methods at present at our disposal for estimating renal function. But large experience with this test has shown that it must not be taken as an absolute index of kidney capacity, applicable to every case.

And the newer methods of blood chemical analysis offer a substantial advance over anything else that has been offered along this line. I have had the privilege of seeing Dr. Gradwohl work in his laboratory, and I am satisfied that these tests, carried out according to his methods, combine both simplicity of application and reliability as to findings. I hope to see the men in New Orleans who do laboratory work prepare themselves to carry out this work, for I believe that the time is not so far distant when we shall no more think of putting a patient on the operating table without a report on his blood findings than we would now of operating without a routine urinary examination.

Dr. Harris: As I am the only laboratory man present connected with a hospital, I feel I should say a few words. I don't think that the fact that these blood chemical tests are not carried out is to be blamed upon those of us who are in charge of the hospital laboratories, but rather upon the fact that the hospitals are not equipped with the facilities for these procedures. When you go into the laboratories as they are, you will see that they have hardly the facilities necessary for the proper pathological and bacteriological work. Another thing is this: We must realize that this particular type of work is more in the province of the physiological chemist. I have long realized this importance and have

discussed with Drs. Chillingworth, Metz and others about the possibility of the organization of such work. I would like to ask Dr. Gradwohl whether or not he considers that such work is not really properly carried out by a physiological chemist. I have been somewhat reluctant about entering into a branch that is separate and distinct from my own domain. We see daily so many examples of the serious results of, for example, faulty Wassermann reactions, carried out by those insufficiently equipped, that one should hesitate to attempt a branch as a side line which is in reality a specialty.

Under the circumstances, I think it unjust that visiting physicians should say that the pathologists in hospitals are remiss. They should encourage the authorities to budget the necessary funds so as to incorporate such a branch into a properly trained assistant. The laboratory must be productive of funds in order to get it.

I would like to ask Dr. Gradwohl as regards the question of the test in children—just how much blood we would have to get along with for a child, as 10 ccs. would render it rather impractical. I am very glad to have heard the paper of Dr. Gradwohl and I hope it might stimulate our physicians to demand of the hospitals the proper essentials for laboratory procedure.

Dr. Johns: I would like to endorse the standpoint of Dr. Harris relative to the present inability of securing proper instruments, and to ask Dr. Gradwohl as to the reliability of several of the new American-made colorimeters and standard chemicals.

Dr. Gradwohl (closing the discussion): Referring to Dr Eustis' discussion, I think he is correct in wishing for more knowledge on the amid-acids. I think that field is being worked now, and I hope we will get some data at some future time. I believe Dr. Harris' point is very well taken—that the fault concerning the laboratory department is in the hospital management. For years they have contributed very little to the establishment and equipment and management of the laboratories. In most quarters, whatever improvement there has been in regard to hospital laboratories has come from laboratory men, and not from the hospital management. It seems the hospital management has never quite seen the point that investment in money in the laboratory work is just as important as maintaining the operating-room, even though it works at an apparent loss. If a hospital is being maintained for the purpose of curing the sick, then what is the use of talking of extravagance? Money should be no object. The laboratory department should be conducted regardless of expense. If this is to be run on the basis of how much work can be done and how much money can be made out of it, it is a very bad policy, and should find no response. Let the work of the laboratory speak for the excellence of the institution.

In many hospitals in St. Louis the same situation has existed there for years, and for a long time there were few laboratories worthy of the name; they never paid a laboratory director enough money to let him settle down in the hospital and remain there. They seemed to be content to appoint some one with a good reputation who was content to take the appointment because his reputation was thereby enhanced; he turned over the work to half-baked technicians and appeared at the laboratory for a short time and took the responsibility for work he never saw and the clinician accepted it because his director was a man of established reputation.

So far as specialism in the hospital laboratory work is concerned, I

do not believe the laboratory of the hospital—a good hospital—ought to have a hospital chemist. Chemistry is a very important part of the clinical work, and one laboratory man cannot be competent in every department and cannot do it all. I believe the tendency is to have a chemical man doing the chemical work of the laboratory. I don't believe in carrying that principle down to the smallest hospital. When the work gets big enough to demand special attention, it can then be done.

Dr. Johns has brought up a very important question regarding the equipment of the laboratory for this kind of work. We need for this work certain apparatus, all of which has been made in America here. There is an instrument described by Dr. Benedict, devised by him, which costs about $15. I have one of these, but have worked very little with it, but I am willing to accept Dr. Benedict's word that it is as good as he says. The Hellige instrument I endorsed in my book, because it used such a small amount of the standard solution, and the standard solutions are so hard to obtain that I recommended it for that reason.

With the Hellige instruments, you keep most of standard solutions in wedges. The standard solution for the estimation of sugar can be made from a pure solution of glucose. It can also be made from a solution of picramic acid. The creatinin can be made by estimation of the amount of creatinin in a specimen of urine. Uric acid must be pure.

"DELUSION AND DREAM."

A Comment on the "Freud Theory."

By S. T. RUCKER, M. D., Memphis, Tenn.

The Standard Dictionary defines a dream as "A succession of mental images, usually confused and incoherent, experienced while sleeping." The Encyclopedia Britannica says "A dream is a state of consciousness during sleep, or a hallucination peculiarly associated with the condition of sleep, but not necessarily confined to that state." Freud defines a dream as "A physiological delusion of the normal human being." A definition that appears to me more comprehensive is, a dream is a phantastic play of the unconscious mind, not logically descriptive, but represented by dramatic symbols and mental images.

Dreams we all have, visions we should have, and delusions we will have, unless our visions and desires find expression in reconstructive effort or in the dramatic phantasy of dreams. The conscious mind works continuously through the brain, its organ and medium of communication. It must find outlet for this activity either through normal or abnormal channels. To repress or confine it is like trying to control an excess of steam. It is well known that repressed or pent-up emotions (and emotions are thoughts) must find an avenue

of escape or, as sometimes expressed, "must get out of the system." The usual way is for men "to cuss it out," for women "to cry it out," boys "to fight it out," and girls to "laugh it out." The giggling, laughing girl is a good illustration of the normal escape of emotive activity.

Ancient people attached great importance to dreams and appear to have understood their language better than we of to-day. Many of their wise men possessed the ability to analyze and interpret dreams. To those who believe in Biblical history it is interesting to note that dreams played no small part as a medium of communication between Jehovah and His people. In the dream of Jacob there was a great stretch of the imagination when he saw a ladder that reached from earth to heaven and beheld angels ascending and descending on it. At the top stood the Lord, who delivered a prophetic message, saying "The descendants of Jacob would prosper, be blessed and spread over the face of the earth." Joseph incurred the enmity of his brothers by interpreting to them a dream he had, saying he would be chosen over them as a leader and ruler. Though he was exiled into Egypt, he became first in authority at the court of Pharaoh and interpreted his dreams. The Lord appeared to Solomon in a dream by night and said, "What shall I give thee?" Solomon asked, in return, for an understanding heart, that he might be able to judge the people and discern between good and evil. These represent some of the many dreams and interpretations of dreams referred to in Biblical history.

The philosophers of ancient Greece and Rome attempted explanations of dreams. Aristotle says, "Dreams are impressions left by objects seen with the eyes, and that a small sound, when exaggerated by slight stimuli, in a dream, becomes noise like thunder." Plato, too, connects dreaming with the normal operations of the mind, and explains them "as prophetic visions received by the lower appetitive soul through the liver." Hippocrates was disposed to admit that some dreams may be divine revelation, but held that others were premonitory of diseased states of the body.

The modern conception and interpretation of dreams is assuming a more scientific aspect, and the Freud theory that a dream is a fulfilment of a repressed or unconscious wish has opened up an interesting field for psychological research. It is well known that those things we wish and try to suppress during the day often come back in dreams at night. So, one initiated in dream-interpretation

may often find traces of things he has suppressed in the course of life. It was therefore natural that Freud, in his search for inadvertent outbreaks of the unconscious life, should turn his attention to dreams, especially so when he was continually meeting with the relation of dreams during his analytic methods of treating nervous disorders. Patients brought them to him in the same way they brought their real experiences. He soon found that dreams were established as determining structures, like any other thought-structure, only with the difference that they were built according to other principles than those which have to do with the waking life. By patient study he was able to learn how to decipher the strange symbol or sign language of the dream. In this way he gradually formulated his psycho-analytic method of determining the significance of dreams in unraveling the psychic tangles of the abnormal mind. What complicates dream-construction most of all is the use of symbols. The dream has an inclination to present everything in visual images. It does not approve of the narrative form, but is essentially dramatic. If one considers the dream as it immediately appears before the unconsciousness, it certainly seems quite meaningless. This has given rise to the teachings, according to which a dream is only a conglomeration of dissociated ideas, originating through some processes which temporarily irritate the mental apparatus. If the dream is subjected to analysis it takes on another sgnification.

When Freud turned his attention in this direction he soon discovered that symbolic speech by no means applies only to dreams. It is a common ingredient of the conscious mind and presents itself in folk-lore, in witticisms, in slang, etc. Primitive man made use of symbols as a means of expression; later our logical and descriptive speech was built upon this foundation. In settling upon one single point in the Freud doctrine which, in importance, exceeds all others, I should suggest his presentation of the connection between dreams and psychology and the process of neurosis construction. It has long been suspected that dreams have something to do with insanity; but until the researches of Freud this remained only a suspicion. His ingenuity was the first that succeeded in seizing upon and working out in detail this apparently inaccessible empirical material. He says dreams and delusion spring from the same source—the repressed. Before the repressed has become strong enough to push itself up into the waking life as a delusion it may

easily have won its first success under the more favorable circumstances of sleep in the form of a dream. During sleep, with the diminution of psychic activity, there enters a slackening of the strength of resistance, which the conscious psychic process offers to the repressed. This slackening is what makes dream-formation possible. Therefore the dream becomes for us the best means of approach to knowledge of the unconscious psyche. Only the dream usually passes rapidly with the revival of waking life and the ground won by the unconscious is again vacated.

In my study of abnormal psychology I have noticed a striking analogy between delusion and dream. The difference appears to be that a dream is acted out during the unconscious or sleep state and abandons the field when consciousness is restored; while delusion holds sway over the mind during the conscious or waking state and disappears during sleep. Now if, as Freud contends, a dream is the physiological delusion of the normal human being, may not a delusion be the pathological dream of the abnormal human being? My observations have been that persons who dream have no delusions, and those who are dominated by delusions have no dreams. Therefore dreams may perform an important function in maintaining mental balance by letting the "repressed" find a physiological exit during sleep, instead of pushing itself up into the waking life as a delusion.

"MEDICAL EXPERIENCES OVERSEAS."*

By LIEUT. COL. JOHN B. ELLIOTT, Jr., New Orleans.

Before saying anything about my medical experiences while in France I must say a word about the officers and nurses and men of Base Hospital 24, with whom I lived for eleven months as director of the unit and oftentimes commanding officer. I can never forget their loyalty to me personally nor their devotion to duty when the real hero of the war, the American "doughboy," was in need of help.

As four of the speakers are from Base Hospital 24, I think it best that I take up only what I saw and did after being detached from that organization.

On August 6, 1918, I was ordered by the chief surgeon, A. E. F., to report to St. Aignan to consult with the commanding officer of

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Camp Hospital 26 on the typhoid situation at that point. On arriving there, after consultation with Major Nagle, chief of the medical service, I found the following most interesting state of affairs: There were forty-six patients suffering with typhoid fever in the worst stage of the disease, all coming from one company, which had arrived from America about four weeks previously. They were being looked after in the most scientific manner and every precaution known to modern medicine was being used to prevent further spread. About three kilometers away 163 other members of the same company were being inspected daily and held in strict isolation; the feces of these cases had been examined weekly in order to segregate at once any carriers. The history of the company was that it had left Camp Cody, New Mexico, some time in June with 270 men, had traveled in a troop train to New York, had left two men sick at Camp Merritt, had dropped seven in a camp near Liverpool, twenty or thirty in Romsey, England, and about fifteen or more at Cherbourg, France, all probably suffering from typhoid fever. This company had been thoroughly vaccinated, some having received as many as nine "shots" of typhoid vaccin prior to June, 1918.

After most thorough study of the whole matter, Major Nagle was able to prove that the trouble had come from a carrier who was a member of the K. P. (kitchen police). Unfortunately, I was unable to get any further light on the question of the vaccin used in these cases.

A few days after returning to my headquarters from this trip I was ordered to report to Headquarters Medical Center, Vittel, for for duty as consultant in general medicine to the hospital center of Vittel and Bazoilles. Luckily for me, Gen. W. S. Thayer, chief consultant in medicine, A. E. F., came to Limoges at just this time and I had the pleasure of a wonderful ride with him from Limoges all the way to Neufchateau, going via Moulin, Autun and Dijon, getting a view of France that can only be had from an auto. At Vittel I found Base Hospitals 23 and 36, and at Comtreville, four kilometers away, Hospitals 31 and 32. At Bazoilles, thirty kilometers away, were Base Hospitals 18, 42, 46, 60, 79, 81 and 116, while at Neufchateau was Base Hospital 66, and ten kilometers further on Convalescent Camp No. 2.

It was my duty to consult with the medical chiefs of the different hospitals as to the personnel of the respective staffs and to see such

cases as we thought advisable. You may imagine what a splendid opportunity this was for differential diagnosis and for learning medicine from the many excellent clinicians I met in my rounds.

My most interesting medical experience here was the epidemic of influenza, which came to us first about August 28, the patients coming from Girardmer to Base Hospital 36 at Vittel, whose medical chief was Lieut. Col. McGraw, of Detroit. From August 28 to November 1 we had 1,400 cases of what we soon learned to diagnose as coalescing broncho-pneumonia, with 453 deaths. The most striking clinical signs were early cyanosis, marked leucopenia and its great fatality in those who had been exhausted or who had become chilled from exposure in open trucks and automobiles.

While we could only demonstrate the influenza bacilli in a very, very small percentage of cases, yet we believed, and still do believe, that it was the primary factor in the epidemic and that the type of pneumonia which developed was dependent entirely on what type was most predominant in the throat of the patient at the time of being attacked by the influenza. Empyema was not so prominent as in the streptococcic type seen in the camps in America during the winter of 1917-1918, but we did see many cases of abscess of the lung, and, in two cases of empyema, Major Baetjer, at Bazoilles, was able to isolate the influenza bacilli in pure culture. The X-ray study of those recovering from influenza was most interesting, all showing a peri-bronchial thickening.

The effect of influenza on the heart was best seen at the convalescent camp at Liffon-le-Grand, where Capt. Bridgman was in charge of the medical work. Here were cases seemingly well in every way except for rapid heart after exertion, and not returned to normal rate until from one month to six weeks, though all physical signs of the disease were absent.

The meetings in Paris each month, under the auspices of the Red Cross, were most instructive, giving one an opportunity to hear the lesson learned from our Allies. I shall never forget the talks by Sir David Bruce and Sir Almoth Wright; but, above all my experiences, I must put first the stimulation and knowledge I received from association with such men as Thayer, Longcope, Webb, Kohn, Gamble, Abbott, Wallace and other leaders in American medicine.

I believe you can safely tell your clients that their sons were well taken care of in France. The devotion of doctors and nurses and men to the sick "doughboy" was simply beyond praise.

By MAJOR JOHN T. HALSEY, New Orleans.

My task to-night is to say a few words about what has been done by the officers, nurses and enlisted men of Base Hospital 24, most of whom are known to you.

After reaching France the officer group of the hospital was pretty badly broken up. One after another of us was ordered to other duties, until finally of the original medical quintet only I was left. Consequently there isn't much to tell you about the work done by the medical side, for the hardest part came after these gentlemen had left us. Of the surgeons, Drs. Maes, Chamberlain, Dicks, Wall and Jones were taken away from us before we really got down to our hardest work. In August, patients began to come in in large numbers, until finally there were over 1,800 sick and wounded soldiers to be cared for by about twelve doctors.

I want to say a word here as to what our enlisted men did at this time. In order that these patients could have beds, they voluntarily gave up their own beds and slept wherever they could find a place—in barns, offices, halls, kitchens and in pup tents on the ground.

As Limoges trains usually depart and arrive between 2 and 5 a. m., frequently some of our men would carry patients up four and five flights of stairs all night, not leaving the job until the last patient was put to bed, and then they would be at work all day as well.

As for the nurses, they stuck to their task equally well. There were strict orders that all nurses were to report sick if they felt out of sorts, but they never did. They simply waited until they were so sick they could do no more.

Dr. Lanford was taken away from us, leaving Dr. King Rand, of Alexandria, to care for the laboratory by himself. It was important work and there was lots of it, so for months Dr. Rand worked nearly every night until 12 o'clock.

A large part of the surgical work that had to be done at this hospital was the after-care of patients already operated on elsewhere. Much of it consisted simply in dressing cases over and over again. It was not what any surgeon would call interesting surgery, but those surgeons never faltered. Up to lunch-time and after lunch until dinner-time, they were at it, and at times it was after midnight before they finished. It was a beautiful and at the same

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time the most skillful example of faithful performance of duty that I have ever seen. I saw work done in several other base hospitals, but nowhere else did I see work as well done as in Base Hospital 24. You can be proud of what those fellow-townsmen of yours did. I personally feel so grateful to them, and have such respect for them, that I intend to name them each. John Smyth, Aleck Ficklen, Paul Lacroix, Muir Bradburn, Warren Scott and Philips Carter went through the worst of it, while Urban Maes and W. O. D. Jones did all there was to do until they left the organization.

Dr. Fenner deserves a paragraph to himself. Under the conditions which prevailed at Limoges there was relatively little for him to do in his own special line, so he simply turned in and did whatever there was to be done—orthopedic or general surgery—and when the medical side was swamped by a flood of medical cases he jumped in and saved the day by taking over medical wards. I feel specially grateful to him for the cheerful and skillful assistance which he rendered me during some of the most strenuous weeks of my life.

The following gives some idea of how we were rushed at times last fall. About the first of October we were told to get ready for a greatly increased number of patients. At that time we had about 700 beds in the hospital. By using every nook and corner we could find, in ten days we had enough beds to be able to take care of 1,500 patients, besides 350 more in an annex the other side of town. We didn't have any more trouble about patients spitting on the floor, for they couldn't hit it. In the first fourteen days of October we took in and cared for 1,500 new patients sent back from the front.

My witness would not be complete did I not speak of the wonderful spirit shown by the patients. Both sick and wounded showed themselves as good soldiers as they had been at the front. Than this, nothing more can be said in the way of praise.

By CAPT. JOHN W. MORRIS, Somerville, Tenn.*

One of the first things you would ask is, "What happens to a prisoner of war?" In my case, I was sent to German battalion headquarters. They ask you all sorts of questions, and we had been taught in advance, in event of capture, to answer all questions promptly and incorrectly. The intelligence officer did not know I

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was an American. He asked if there were many French among us, and I told him incorrectly that the tunnels of Arras were full of French troops. They were worried about the troops in Arras, because in April, 1917, the British, by hiding thousands of men in them, had surprised the Hun and made one of the successful pushes of the war prior to the German advance in March. After interrogation we were sent back to a concentration camp, said camp consisting of barbed wire fence around a brewery. After staying there a few days we were sent to Belgium, where I stayed a few months to treat the British wounded.

We found the hospital to be a very small building, which had formerly been a school for boys; the hospital contained about 700 seriously wounded men, 300 of whom were British. The condition was awful—a great deal of pus and infection, and in some cases the pus had gone through the mattress on to the floor. Some of the men had not been dressed in two weeks.

There was very little gauze for dressing. We used paper. If a patient was fortunate enough to have a gauze bandage he would unroll it himself. The paper was very unsatisfactory, because it got hard and uncomfortable from the excretion of the wounds. For the 300 men we had one German nurse. The principal anesthetic was ethyl chloride, and it was satisfactory. All patients had to be taken to the operating room for dressings, and voluminous records had to be kept. Every wounded man received two injections of tetanus antitoxin. We were allowed a certain amount of drugs and dressings daily, and when these were exhausted we were at liberty to go for a walk under armed guards, provided we did not go through the village. Our usual walk was along the towpath of the canal. The only disadvantage was we had to see great barge loads of good American food go by for French and Belgians, and we were as hungry as any of them.

We made the acquaintance of many Belgian people, and without exception the guard allowed us to speak with them, provided we kept out of sight of the German officers or N. C. O. Their chief grievance against the Germans was the deportation of girls; you could tear down their houses, take their laces, machinery, cattle, wines and gold, but when the Hun deported Belgian girls he did a low thing that the civilized world will not forget or forgive.

The food we were given was dark bread, so often described; plenty of soup and imitation coffee; the coffee was not unlike that

used by our people during the Civil War. When our soup was nice and thick with meat we knew that an Allied aviator had laid an egg on Hun Cavalry, where it did a prisoner of war most good.

In July we were sent back to Germany by the way of Brussels, Metz and Strassburg on to Rasstatt. We found here about 300 French officers—the cleanest, nicest fellows I had ever seen. They were always planning escape, the usual method being to empty straw from their mattress, tie grass on it, get under it and crawl to the fence, cut the wire, throw the cutters back for the next party, let the guard go by, and then go on their way rejoicing. The next morning at roll-call they would, of course, be missing. The superior officer called the roll by barracks, with no better result. For an officer to allow a man to escape means punishment, the usual punishment being to send him to the front. The usual explanation the officers in charge would give is that the men had never been there at all. A Frenchman brought in a wireless outfit and we got the news from the front daily.

We were next sent to an American camp located in the Black Forest. The elevation is something like 5,000 feet; very cool and healthy. Here we secured Red Cross food and were allowed to go walking every day by turning in a word-of-honor card. While at that camp Puryear, Willis and Isaacs escaped. From that time on we had certain restrictions, but on the whole we were not molested by the guards or civilians. There have been a great many charges made against the German soldiers and civilians that are not true; they have done some things that have never been published, but we must remember that in Germany they have the identical propaganda against French, British and Americans. Many of the German people were misled as to the cause of the war, but they were in the midst of their apparently successful drive towards the channel ports and towards Paris; they were entirely satisfied with Hindenburg, Ludendorff and the Kaiser.

By MAJOR IVAN ISAAC LEMANN, New Orleans.*

You now have a pretty good idea of what it was like, from the talks you have heard—what it was like at the Base Hospital and what it was like at the front. In general, our life was very different from what most of our friends over here think it was. I am greeted on all sides by friends who exclaim over the wonderful times and

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the dangers and hardships I have had. As a matter of fact, there were very few of us, except Col. Maes, who had real hardships. Most of us slept in pretty good beds, and some of us, like Col. Elliott, lived off the best of the land.

I think you may be interested in one thrilling experience that all of your friends of Base Hospital 24 shared together. It was in crossing the English Channel from Southampton to Havre. We were jammed in on a small boat, no larger than a seagoing tug, so that there was literally no space to sit down. We were supposed to make the trip in about eight to nine hours, but as a matter of fact it took us several hours more than that. We left Southampton about 4 o'clock in the afternoon accompanied by a torpedo boat destroyer to guide and protect us, and about midnight, in the middle of the channel, in the pitch blackness of the night, our engine broke down and we lay becalmed an hour or more. In addition to this, our boat made a terrific noise, letting off steam, and if there had been a submarine within hearing distance we would have made a fine target. In spite of all of this, every one remained perfectly quiet and composed, and there was nothing in the slightest approaching alarm or panic.

Dr. Halsey has told you something about our friends of Base Hospital 24 and the work they did. I feel that I can, with perfect modesty, reiterate and emphasize what he has said, for the greater part of the good work was done after I left them. We have good reason to be proud of them.

After I left Base Hospital 24 I was assigned as chief of the medical service of Base Hospital 76 at Vichy. This was a conglomerate hospital, not representing any particular institution, but made up from various parts of the country. I found conditions there very different from those I had left at Base Hospital 24 in Limoges. The equipment of Base Hospital 76 had not arrived, nor had the nurses. Our enlisted personnel and our patients had to drink their soup and coffee from empty tomato cans, and we had very few kitchen utensils. The equipment that we were able to borrow from other base hospitals in Vichy was equally scanty. But, in spite of all of this, our patients got very good care and our hospital at one time had 1,700 patients. There were three other base hospitals in Vichy, and it was planned that this center should care for approximately 20,000 patients, if the armistice had not come.

Vichy is a city of hotels. Normally it has about 15,000 in-

habitants, and during the season from 50,000 to 100,000 visitors. Altogether, the Americans took over about eighty hotels for the use of the base hospital there.

There are several things in the way of professional experience that I might relate that possibly might interest you. I consider that one of the most valuable experiences I had was to have under my care, under the direction of Dr. Pollock, of Chicago, a considerable number of war psychoneuroses, so-called shell-shock, hysteria, etc. The effect of treating men under discipline made a tremendous impression upon me, and I feel that I have returned an entirely different doctor than I was when I went away. My attitude to my patients, I am sure, has changed considerably, and to the benefit of the patients.

Another experience which was valuable was that which we had in meeting the situation caused by the outbreak of numerous cases of enterocolitis. Most of these came from the front to the base hospitals and were probably due to bad food or bad water. At times we thought some of them due to poisoning. At one time I had several hundred such diarrhea cases on hand in Vichy under the conditions I have already outlined, so that the problem of handling the diet was difficult. In addition to this, we had no bismuth nor any other astringent drug. The situation we met in this way: As each diarrhea patient was admitted, his clothes were taken away and he was put to bed. This was done in order that he might not obtain any food other than that which was brought to him. He was then given a large dose of castor oil, and this was repeated from time to time as needed. As the diarrhea improved, the patient was given a ticket to a soft-diet mess, where he obtained only soft cereals and liquids. Upon further improvement he was promoted to the full-diet mess, for which another ticket was required. With this system we were able to clear up practically all of the cases and relieve the situation that at one time threatened to be alarming in its proportions.

NEWS AND COMMENT

MEETING OF THE AMERICAN MEDICAL ASSOCIATION.—The seventy-first annual meeting of the American Medical Association will be held in Atlantic City, N. J., June 9 to 13.

AMERICAN SOCIETY OF TROPICAL MEDICINE MEETING.—On June 16 and 17, the American Society of Tropical Medicine will hold its meeting in Atlantic City, in conjunction with the Congress of American Physicians and Surgeons and its affiliated societies. It is to be hoped that every member of the Society can arrange to be present and thus help towards the success of the meeting. Members wishing to contribute papers or to present other interesting matter to the Society should notify the acting secretary, Dr. Sidney K. Simon, 1105 Maison Blanche Building, New Orleans.

OFFICERS OF THE LOUISIANA STATE MEDICAL SOCIETY ELECTED.—The officers elected for 1920 at the meeting of the Louisiana State Medical Society, which met in Shreveport, April 8, 9 and 10, are: Dr. L. Henry, of Lecompte, president; Dr. C. P. Gray, of Monroe, Dr. S. C. Barrow, of Shreveport, and Dr. T. J. Dimitry, of New Orleans, vice-presidents; Dr. E. W. Mahler, of New Orleans, secretary, and Drs. W. H. Seemann, of New Orleans, and C. Pierson, of Jackson, were named delegates to the A. M. A. meeting at Atlantic City in June.

CO-OPERATION OF STATES TO CONTROL VENEREAL DISEASE.—On April 1, 1919, forty-four States had passed the necessary laws and will coöperate with the United States Public Health Service in carrying out its program for venereal disease control. Eighteen States have made appropriations equal to that of the Kahn Chamberlain allotment, and eighteen States have established a separate venereal disease division.

RADIUM OUTPUT.—Since 1913, when radium was first produced in the United States, the radium output of the Standard Chemical Company, of Pittsburgh, has been thirty-nine radium element grams, according to *Science*. The total radium production in this country up to 1919 approximates fifty-five grams of radium, which represents probably more than half of all the radium produced in the world.

INFANT MORTALITY RATE LOWERED.—For the past several years the infant mortality rate of St. Louis has been lower than that of any other large city, but in 1918 New York reduced her infant death rate to 91-7, while St. Louis had a rate of 94.4 and took second place. Baltimore was the highest in the list of ten large cities, having a death rate of 147.7, while the death rate for Chicago was 131.3.

SCHOLARSHIP FOR NURSES.—The American Red Cross has announced an appropriation of $100,000 as a scholarship fund to induce graduate nurses released from the army and navy nurse corps to train for public health nursing. A maximum scholarship of $600 will be granted for an eight months' course of training and $300 for a four months' course. The fund will be administered by the Red Cross Department of Nursing, and scholarships will be granted on the recommendation of Red Cross division directors of public health nursing.

PROHIBITION AND DRUG ADDICTION.—According to the assertion of Commissioner Copeland, of New York City, the advent of prohibition will be followed by a large increase in the number of drug addicts. He states that one person in every thirty in New York to-day is addicted to the use of some sort of a drug. The scarcity of liquor has already had its effect on the drug market, he claims, and the amount of cocain which was used in December and January was greater than for the ten preceding months, and in February the increase was so great that the wholesalers had to put a limit on the sales. He urges that steps be taken to meet the coming situation, and pointed out the defects of the law concerning the sale of narcotics.

LONDON PHYSICIANS ORGANIZE BUSINESS UNION.—It is understood that, in view of the impending establishment of the Ministry of Health and its consequent effects on the medical profession, a meeting of the majority of physicians of London was held on February 23 and adopted favorably the immediate organization of the medical profession on a trade basis. Twenty thousand members were expected to join the union. The professional status of the physicians represented at this meeting is not known.

MOSQUITOES FOR ARMY MEDICAL MUSEUM.—According to daily press reports, medical officers at all army camps throughout the

country have been ordered by Surgeon General Ireland to obtain one or more specimens of every species of mosquito found in the vicinity of their camps. The mosquitoes will be classified and placed in the Army Medical Museum.

SOCIETY FOR THE STUDY OF EPILEPSY TO MEET.—The next annual meeting of the National Association for the Study of Epilepsy will be held at the Craig Colony for Epileptics, Sonyea, N. Y., June 6-7, under the presidency of Dr. William T. Shanahan, Sonyea.

RED CROSS IN AFTER-WAR ACTIVITY.—A convention of the Red Cross organizations of the world, to meet at Geneva thirty days after the declaration of peace, has been called by the International Red Cross Committee. This call was issued at the request of the Red Cross societies of the United States, France, Great Britain, Italy and Japan, whose representatives have constituted themselves a committee to formulate and propose an extended after-war program of activities in the interest of humanity.

MILLIONS LOST THROUGH RATS.—It is estimated that $200,000,000 is lost through the agency of rats each year in the United States. In the average town it is estimated that the rat population equals the human population. Rural districts usually have about ten rat inhabitants for every human inhabitant. It requires about $2 to support a rat for one year.

MONEY FOR MEDICAL EDUCATION.—At a meeting of the General Education Board of the Rockefeller Foundation, appropriations aggregating $1,108,525 were made to various educational institutions throughout the United States. The largest amounts of this sum were given to medical education, $400,000 being given to Johns Hopkins University Medical School for the endowment of a department of obstetrics, and $150,000 to the Meharry Medical College at Nashville, Tenn.

POSTURE LEAGUE MEETING.—The American Posture League held its annual meeting March 8. An address on posture in industry was made by Mr. Harry Arthur Hoff, consulting engineer, after which clinical demonstration of methods of recognizing and recording posture were given. Moving pictures and other lantern slides on posture were shown. Addresses were also made on the anatomic demonstration of some of the articles resulting from the technical committee of the league, including the chairs.

Decline in Mental Disease From Drink Abstinence.—A report from the Health Office of Vienna, New York, reveals a considerable decline in mental disease, which is attributed to the lessening consumption of alcoholic beverages, which are extremely high in price. The inebriates' ward in the Vienna Lunatic Asylum is closed for lack of patients.

The United States Civil Service Commission announces an open competitive examination for medical assistant, for men only, to fill a vacancy in the Bureau of Chemistry, Department of Agriculture, Washington, D. C., at a salary of $2,000 a year. For further information apply for Form 2118, stating the title of the examination desired, to the Civil Service Commission, Washington, D. C.

Plan for Eugenics Memorial.—A "Roosevelt Institute of American Family Life" is proposed by the Eugenics Research Association of Cold Springs Harbor, L. I., to be organized and developed with the eugenics record office of the Carnegie Institute at Washington. The object of the proposal is to provide an institution to combat "race suicide" and to "advance those ideas of responsibility and patriotic parenthood for which Theodore Roosevelt so valiantly battled."

Bacteriologists for Camps and Hospitals.—A special three months' course for those who wish to qualify as laboratory assistants in bacteriologic work for immediate service in camps and hospitals has been arranged by the New York University and Bellevue Hospital Medical College. A call for those assistants has been issued from the Surgeon General's office. The course is arranged by Dr. Wm. H. Park, director of laboratories for the health department, and Dr. Anna W. Williams, assistant director. The fee is $75; a few scholarships may be available. Preference will be given to college women with some preliminary training. Applications may be made to Dr. Park at the New York Department of Health.

The Owl Drug Company's Commendable Policy.—Announcement has been made by the Owl Drug Company, with a large number of retail drug stores in California, Oregon and Washington, that no preparations for the self-treatment of gonorrhea will be sold in any of its stores. Remedies for the purpose will only be sold on prescriptions by physicians.

Sir Herman Weber Dies.—Sir Herman Weber, renowned in the field of tuberculosis and laryngology and author of the "Prolongation of Life," died recently in London, aged ninety-five. He retired from practice at eighty, but spent daily two or three hours in the open air, walking from thirty to fifty miles a week. He was among the first to advise the tuberculous to go to the mountains, even in winter.

Nobel Prize Award.—Prof. C. G. Barkla, professor of natural history in the University of Edinburgh, was awarded the Nobel Prize for 1917 for researches in Rœntgen rays and secondary rays.

Personals.—Dr. Livingston Ferrand, president of the University of Colorado, was appointed by President Wilson chairman of the Central Committee of the American Red Cross, to succeed William H. Taft.

Dr. Charles S. Holbrook, formerly associated with the Louisiana Insane Asylum at Jackson, has opened an office in the Cusachs Building, New Orleans, and will limit his practice to neurology and psychiatry.

Dr. J. T. Nix, Jr., announces that he has opened up offices at 1407 Carrollton avenue, New Orleans.

Among the Louisiana men who have returned, since our last list, from service in this country or abroad, are: Drs. P. J. Carter, O. L. Pothier, E. L. Fenno, W. L. Bendel, L. J. Genella, L. A. Ledoux, P. L. Querens, J. Geo. Dempsey, J. F. Dicks, C. P. Holderith, J. M. Singleton, New Orleans; W. M. Ledbetter, P. W. Oden, G. W. Birchfield, Shreveport; T. W. Evans, Jackson; W. P. Lambeth, Allendale; J. C. Burdett, Pelican; C. C. Self, Barham; J. J. Robert, Baton Rouge; J. D. Frazier, DeRidder; P. A. Kibbe, Erath; E. R. Yancey, Jonesville; C. E. Verdier, Madisonville; K. A. Roy, Mansura; J. F. Dunshie, Poydras; T. Butler, St. Francisville; J. T. Cappel, Alexandria.

The following doctors of New Orleans attended the meeting of the Louisiana State Medical Society, held in Shreveport last month: A. E. Fossier, H. E. Bernadas, W. H. Harris, A. G. Friedrichs, Allan Eustis, W. H. Knolle, E. W. Mahler, Homer Dupuy, H. W. E. Walther, H. Leidenheimer, W. J. Durel, T. J. Dimitry, M. W. Swords, C. V. Unsworth, J. A. O'Hara, A. Granger, F. J. Chalaron, Paul Gelpi, H. B. Gessner, J. H. Ellis, A. Nelken, Louis Levy, Isadore Dyer, L. L. Cazenavette, C. L. Eshleman, M. P. Boebinger,

F. J. Kinberger, E. C. Samuel, A. L. Levin, Chas. Chassaignac, J. T. Nix, Wm. Kohlmann, W. C. Hendrick, E. F. Salerno and W. H. Seemann.

MISS DELANO, RED CROSS DIRECTOR, DIES.—Miss Jane A. Delano, who died April 15 at Base Hospital No. 8 at Chauvigny, France, was one of the foremost figures of the nursing world. More than 30,000 nurses were recruited under her direction, through the American Red Cross, for service with the army and navy after the United States entered the war. She was born in Watkins, N. Y., in 1862, and graduated from the Bellevue Hospital, New York, in 1886. Shortly after her graduation she volunteered to nurse a yellow fever epidemic in Jacksonville, Fla. Her work then took her to Bisbee, Ariz., where she established a hospital. Two years later she became superintendent of the nurses' training school of the University of Pennsylvania, and five years afterward of the Bellevue Hospital. She served three times as president of the American Nurses' Association and several years as head of the directorate of the *American Journal of Nursing*. She was a woman of striking personality and appearance. A gentle manner and a sympathy that was boundless won for her a great circle of friends. Miss Delano served the American Red Cross from first to last without compensation.

DIED.—On April 9, 1919, Dr. James H. Holstein, of New Orleans.

On April 17, 1919, Dr. Irenee Cier, of New Orleans.

BOOK REVIEWS AND NOTICES

All new publications sent to the JOURNAL *will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the* JOURNAL *to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of respective publications. The acceptance of a book implies no obligation to review.*

The Newer Knowledge of Nutrition. The Use of Foods for the Preservation of Vitality and Health, by E. V. McCollum. The Macmillan Company, New York.

This little book contains the results of extensive research as to the essential elements in normal nutrition and growth which have been conducted by McCollum and his associates and which have appeared from time to time since 1913, mostly in the **Journal of Biological Chemistry.**

Reaching so few clinicians by this means, the book should be well

received. It is intensely interesting to one even with no special knowledge of metabolism, and can be especially recommended to pediatrists. McCollum proves, by carefully-controlled experiments, that milk (butterfat) and the leaves of plants are to be regarded as protective foods and should never be omitted from the diet.

The chapter on "Deficiency Diseases" adds considerable practical knowledge to the earlier work of Funk and Frazer and Stanton. The general practitioner will be especially interested in the chapter on "The Planning of the Diet," in which the following appears:

"Liberal consumption of all the essential constituents of a normal diet, prompt digestion and absorption and prompt evacuation of the undigested residue from the intestine before extensive absorption of products of bacterial decomposition of proteins can take place, are the optimum conditions for the maintenance of vigor and the characteristics of youth."

The text is amply illustrated by illustrations and charts. The book should be read by every physician and trained nurse. A. E.

Compend of Genito-Urinary Diseases and Syphilis, by Chas. S. Hirsch, M. D. P. Blakiston's Son & Co., Philadelphia.

This compend is probably neither better nor worse than compends usually are. There must be a fair demand for this character of book, as this is the second edition now offered, yet it seems to the reviewer that they generally present either too much or too little on the various subdivisions of the subject handled. This edition calls for more careful proofreading. C. C.

Information for the Tuberculous, by F. W. Wittich, M. D., Instructor in Medicine and Physician-in-Charge, Tuberculous Dispensary, University of Minnesota Medical School; Visiting Physician, University Hospital, Minneapolis, Minn. C. V. Mosby & Co.

This little book is carefully and accurately written, and may be with safety and with advantage placed in the hands of the tuberculous patient. The style is clear and pleasing, so that its perusal and study is not difficult. Only occasionally does the author seem to go beyond what the average layman may be expected to understand fully without technical training. A little half-comprehended information is sometimes a dangerous thing. LEMANN.

Clinical Medicine for Nurses, by Paul H. Ringer, A. B., M. D., Member of Staff of Asheville Mission Hospital, Asheville, N. C., and of Biltmore Hospital, Biltmore, N. C. F. A. Davis Company.

This compend is modern and reliable. It may be commended to lecturers as a guide and outline of the scope of talks to nurses, and also it may be recommended as a basis for class lessons and quizzes.

LEMANN.

The Medical Clinics of North America. September, 1918. U. S. Army Member. W. B. Saunders Company, Philadelphia and London.

This number presents an excellent and valuable collection of papers dealing principally with various types of pneumonias and their complications occurring in the camps last year. Particularly noteworthy are the papers of Hamburger and Fox on Pneumococcus and Streptococcus Infections and Measles at Camp Zachary Taylor, and that of McCallum on

Streptococcal Pneumonias of Army Camps. Those who saw service in the camps will find here an epitome and review of their experience. Those to whom this service has been denied will gain a good idea of some of the problems encountered and of some of the lessons that have been learned.
LEMANN.

A Practical Medical Dictionary, by Thomas Lathrop Stedman, A. M., M. D. Fifth revised edition. Wm. Wood & Co., New York.

The usefulness of a standard dictionary is dependent upon its continued revision. The fact that over fifteen hundred new titles and subtitles have been added in the present volume, many of them arising from the war, should maintain the popularity of this publication, already so well established. DYER.

Quarterly Medical Clinics, by Frank Smithies, F. A. C. P. Medicine and Surgery Publishing Company, St. Louis.

This publication consists of the detailed case reports and observations on fifteen cases occurring in the clinic practice of the author, and of which careful notes were taken during the period of observation. With a view to employing the material for teaching purposes, the cases are systematically arranged and presented, with history, examinations, and detail of method of special examinations are given. Numerous illustrations are included, showing X-ray findings, technic, apparatus, etc. Such case discussions are always of interest to the reader who may not see the clinic itself. The publishers have spared no effort to present the matter contained in an excellent manner, as far as print, plates and general arrangement are concerned. DYER

A Manual of Prescription-Writing, by Matthew D. Mann, A. M., M. D. Revised by Edward Cox Mann, M. D. Sixth edition. G. P. Putnam's Sons, New York and London.

Excellently arranged, with comprehensive contents in small compass, this little book seems to offer all that is necessary to educate the student (or doctor) to the right way of writing prescriptions. The book thoroughly emphasizes the importance of Latin in prescription-writing, and is an excellent plea for the more earnest consideration of Latin as a prerequisite to the study of medicine—that is, if real prescription-writing is to survive. DYER.

Tropical Surgery and Diseases of the Far East, by John R. McDill, M. D., F. A. C. S. C. V. Mosby Company, St. Louis.

Altogether a most interesting contribution to tropical medicine, with added value in the surgical opportunities and experiences related from the author's own practice among different peoples. In a number of years as medical officer in the army in Cuba, in the Philippines, and from association with medical men in China, Japan and other places in the Far East and in the tropics, the author has gathered his material, which ranges from the newer leishmaniana to surgical technic in amebic dysentery. Many illustrations, of which the most important are original drawings, add interest to the text. The obscurer diseases of gangosa, yaws, and such, are well described, and the diseases of the Far East, compiled and carefully worked out from material derived from medical men working in these fields, are particularly valuable. DYER.

PUBLICATIONS RECEIVED

W. B. SAUNDERS COMPANY, Philadelphia and London, 1919.

Clinical Microscopy and Chemistry, by F. A. McJunkin, M. A., M. D.

The Surgical Clinics of Chicago. February, 1919. Vol. 3, No. 1.

P. BLAKISTON'S SON & CO., Philadelphia, 1919.

Electricity in Medicine, by George W. Jacoby, M. D., and J. Ralph Jacoby, A. B., M. D.

WILLIAM WOOD & CO., New York, 1919.

War Surgery of the Face, by John B. Roberts, A. M., M. D., F. A. C. S.

A Textbook of Pathology, by Francis Delafield, M. D., LL. D., and T. Mitchell Prudden, M. D., LL. D. Eleventh edition, revised by Francis Carter Wood, M. D.

THE MACMILLAN COMPANY, New York, 1919.

Tuberculosis of the Lymphatic System, by Walter Bradford Metcalf, M. D.

GOVERNMENT PRINTING OFFICE, Washington, D. C., 1919.

United States Naval Medical Bulletin. Report on Medical and Surgical Developments of the War, by William Seaman Bainbridge.

Public Health Reports. Vol. 34, Nos. 10, 11, 12 and 13.

MISCELLANEOUS:

Annual Report of the Directors of the American Telephone and Telegraph Company to the Stockholders. For the year ending December 31, 1918.

Special Report of the Attorney General of Porto Rico to the Governor of Porto Rico Concerning the Suppression of Vice and Prostitution in Connection With the Mobilization of the National Army at Camp Las Casas. February 1, 1918.

REPRINTS.

Some Clinical Examples of Low and Lowered Systolic Blood Pressure; Diet in Cardiac Insufficiency; Cardiac Hypertrophy as Observed in Chronic Nephritis; Ulcerative Angina; Typhoid Spine; Human Glanders; The Vicious Circle in Oral Sepsis; Salvarsan in the Treatment of Double Infections, Tuberculosis and Syphilis; The Treatment of Four Severe Generalized Streptococcus Infections With the Combined Employment of Anti-Streptococcus Serum and Autogenous Vaccins, by Nathaniel Bowditch Potter, M. D.

Medical Supervision of Athletics Among Boys at Boarding School, by Nathaniel Bowditch Potter, M. D., and James Taylor Harrington, M. D.

Streptococcus Oral Sepsis: An Attempt to Apply a Complement Fixation Test and to Determine the Value of a Routine Blood Examination, by Nathaniel Bowditch Potter, M. D., Samuel Bradbury, M. D., and Archibald McNeil, M. D.

Notes on Minor Cutaneous Affections in the Anglo-Egyptian Sudan, by Albert J. Chalmers, M. D., F. R. C. S., D. P. H., and Alexander Marshall.

Enterica in the Sudan, by Major R. G. Archibald, M. D., D. S. O., R. A. M. C.

The Classification of Trypanosomes, by Albert J. Chalmers, M. D., F. R. C. S., D. P. H.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans, for March, 1919.

CAUSE.	White.	Colored.	Total.
Typhoid Fever	------	1	1
Intermittent Fever (Malarial Cachexia)	------	2	2
Smallpox	------	------	------
Measles	------	------	------
Scarlet Fever	------	------	------
Whooping Cough	------	1	1
Diphtheria and Croup	1	------	1
Influenza	24	11	35
Cholera Nostras	------	------	------
Pyemia and Septicemia	------	------	------
Tuberculosis	60	36	96
Cancer	20	5	25
Rheumatism and Gout	------	1	1
Diabetes	3	------	3
Alcoholism	------	------	------
Encephalitis and Meningitis	4	------	4
Locomotor Ataxia	1	------	1
Congestion, Hemorrhage and Softening of Brain	14	7	21
Paralysis	2	1	3
Convulsions of Infancy	------	2	2
Other Diseases of Infancy	12	2	14
Tetanus	------	1	1
Other Nervous Diseases	3	1	4
Heart Diseases	50	37	87
Bronchitis	1	12	13
Pneumonia and Broncho-Pneumonia	35	31	66
Other Respiratory Diseases	3	------	3
Ulcer of Stomach	------	------	------
Other Diseases of the Stomach	1	3	4
Diarrhea, Dysentery and Enteritis	8	14	22
Hernia, Intestinal Obstruction	3	3	6
Cirrhosis of Liver	5	1	6
Other Diseases of the Liver	4	2	6
Simple Peritonitis	1	------	1
Appendicitis	3	3	6
Bright's Disease	25	13	38
Other Genito-Urinary Diseases	17	9	26
Puerperal Diseases	2	2	4
Senile Debility	8	------	8
Suicide	------	1	1
Injuries	25	18	43
All Other Causes	38	18	56
TOTAL	373	228	601

Still-born Children—White, 21; colored, 17; total 38.

Population of City (estimated)—White, 283,000; colored, 106,000; total, 389,000.

Death Rate per 1,000 per Annum for March—White, 15.82; colored, 25.81; total, 18.54. Non-residents excluded, 15.64.

METEOROLOGIC SUMMARY (U. S. Weather Bureau).

Mean atmospheric pressure..... 30.04
Mean temperature..... 64
Total precipitation..... 3.22 inches
Prevailing direction of wind, southeast.